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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/703,927	11/02/2000	Junji Shirai	PM 275275	3768

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EXAMINER

YOON, TAE H

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 12/05/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

MIF-4

# Office Action Summary

Application No. 9/703,927	Applicant(s) Shirai et al.	
Examiner T. Yoon	Group Art Unit 1714	

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- ☒ Responsive to communication(s) filed on 11-2-00 Pre Amended
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-4 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-4 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

## Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some ☒ None of the:
- ☒ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3
- ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

Office Action Summary

Art Unit: 1714

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recited "types" is indefinite, and cancellation of "types of" is suggested.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Abolins (US 4,692,490).

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Abolins teaches a thin molded article, having L/t of 83 (5/0.06), of PPO and HIPS (butadiene modified styrene copolymer) in table 1. The use of clay is taught at col. 6, line 37. Thus, the instant invention lacks novelty.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abolins (US 4,692,490) in view of Takekoshi et al (US 5,707,439 or 5,530,052).

The instant invention further recites two or more organic agents treated clay over Abolins. However, the use of such clay in polymeric composition in order to obtain improved mechanical properties is known as taught by Takekoshi et al, examples and col. 2, lines 62-67 of US'439 and examples and col. 4, lines 59-67 of US'052 wherein the use of mixed onium cations is taught.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize clays treated with mixed onium cations of Takekoshi et al in Abolins since Abolins teaches employing clays and since the onium treated clays are well known for their superior properties in polymeric composition.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosaka et al (US 4,483,958) or Chao et al (US 5,952,417) in view of Takekoshi et al (US 5,707,439 or 5,530,052), and further in view of Abolins (US 4,692,490) or Mizutani et al (US 2001/0014389 A1).

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Kosaka et al (example 11) and Chao et al (table 1) teach compositions comprising PPO, HIPS and clay. The instant invention further recites two or more organic agents treated clay and a thin molded article over Kosaka et al and Chao et al. Takekoshi et al teach such clay, and Abolins (table 1) and Mizutani et al (abstract and sections 0025 and 0037) teach the instant thin molded article.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize clays treated with mixed onium cations of Takekoshi et al in Kosaka et al or Chao et al and further to make a thin molded article with teaching of Abolins or Mizutani et al since Kosaka et al and Chao et al teach clays and since the onium treated clays are well known for their superior properties in polymeric composition and since a thin molded article of PPO and HIPS or PPO and an elastomer such as SBR is a routine in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (703) 308-2389. The examiner can normally be reached on Monday to Thursday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-5408.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

THY/November 28, 2001

  
TAE H. YOON  
PRIMARY EXAMINER